

REMARKS

All the claims examined on the merits in this application have been rejected on formal grounds. Applicants have amended their claims and respectfully submit that all the claims currently in this application are patentable over the rejection of record.

Turning to the sole ground of rejection, Claim 1 stands rejected on formal grounds under 35 U.S.C. §112, first and second paragraphs. Specifically, this ground of rejection is predicated upon the alleged ambiguous meaning of the terms “heterocyclyl” and “heteraryl.”

To the extent that the Official Action avers that the term “heteroaryl” is unacceptable as it reads on heterocyclic rings, applicants concede that this is true. Indeed, applicants submit herewith the Table of Contents of the textbook, “Heterocyclic Chemistry,” 2nd Edition by T.L. Gilchrist, John Wiley & Sons, Inc., New York 1992. That standard text is an exhaustive survey of heterocyclic chemistry in which the enclosed Table of Contents establishes that heterocyclic compounds may be aromatic, and thus heteroaryl, or non-aromatic. As such, heteroaryl is subgenus of the genus, heterocyclic.

To the extent that the claims includes Markush groups in which separate members may, in the alternate, be heterocyclic or heteroaryl, such recitation is redundant. Therefore, applicants have amended the claims to remove the meaning heteroaryl for radicals which are defined by a Markush group in which both heteroaryl and heterocyclyl are members.

It is emphasized that the recitation of heteroaryl remains in the claims. That recitation appears in claims where radical meanings do not include heterocyclyl. Moreover, that

meaning appears in claims dependent from claims where the radical includes heterocylyl as a meaning. This is proper since heteroaryl is a subgenus of heterocyclyl.

The above remarks establish the deletion of the term “heteroaryl,” wherever it is recited in Markush groups, is based on that meaning being encompassed by the broader generic radical, “heterocyclyl,” also included in the Markush group. However, that term has been retained in the claims of the present application insofar as “heteroaryl” is an unambiguous term well understood by those skilled in the art.

It is indeed the case that Claim 1 has been amended to introduce (C₁-C₁₀) heteroaryl as an additional meaning of R¹⁵. Support for this introduction is the original inclusion of that meaning in Claim 35. The introduction of that meaning into Claim 1 provides antecedent basis for its inclusion in original Claim 35.

35 U.S.C. §1.112, first paragraph requires that written a description in the specification must enable those skilled in the art to which it pertains to make and use the invention. Those skilled in the art are aware of the meaning of the radical “heteroaryl,” as defined in the proffered Gilcrest text. Similarly, the meaning of the term “heterocyclyl” is fully defined in Gilcrest. These definitions in a standard text evidence knowledge, by those skilled in the art, of the full and complete meanings of these terms.

The allegation is made in the outstanding Official Action that these terms are too broad to be understood by those skilled in the art. It is presumably this theory that prompts the instant rejection, made under 35 U.S.C. §112, second paragraph, that Claim 1 is indefinite.

Surprisingly, this specific issue, raised in the outstanding Official Action, has been addressed by the predecessor of the current USPTO Board of Patent Appeals and Interferences, the USPTO Board of Appeals. The Board of Appeals held that the term “heterocyclic” has an art recognized meaning. Ex parte Scherberich and Pfeifer, 201 USPQ 397 (PTO Bd. App. 1977). That the term “heterocyclic” has an art recognized meaning eliminates the need for a more elaborate traverse of the outstanding rejection of Claim 1. Suffice it to say, that this term is art recognized makes the terms “heterocyclyl” and “heteroaryl” definitive terms whose meanings are well understood by those skilled in the art.

As far as the alleged overbroad scope of the terms is concerned, it is axiomatic that terms in a claim are interpreted to be limited to operative embodiments. In any event there is no evidence advanced in the Official Action supporting this contention.

The above remarks, which establish the patentable nature, under 35 USC §112 ¶¶ 1 and 2, of Claim 1 makes moot the rejection of Claims 2, 5, 8, 11 and 14-42 as being dependent from a rejected claim. Reconsideration and removal of the rejection of all the claims subject to the outstanding rejection is therefore deemed appropriate. Such action is respectfully urged.

It is noted that the claims have been carefully reviewed and minor, non-substantive changes have been thereto. These changes correct grammatical and spelling errors as well as correction of improper Markush group language.

The above amendment and remarks establish the patentable nature of all the claims currently in this application. Notice of Allowance and passage to issue of these claims,

Claims 1, 2, 5, 8, 11 and 14-42, is therefore respectfully solicited.

Respectfully submitted,



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